

<b>Applicant Name</b>	Montana Department of Natural Resources and Conservation (DNRC), Water Resources Division (WRD)
<b>Project Name</b>	East Fork Siphon Replacement and Main Canal Lining Project

### **Project Abstract**

The Flint Creek Water Project (FCWP) is owned by the DNRC and operated by the Nilan Water Users Association. The project originally comprised a 16,040 acre-foot off-stream reservoir and five delivery canals, totaling 46.6 miles in length. The storage water carried by the supply canal is provided by the East Fork Reservoir. The Main Canal, which feeds all the four other delivery canals, is 7.7 miles long. Construction of the original project was completed in 1939. The transfer of ownership of all of the delivery canals, except the Main Canal, from the State to the Flint Creek Water Users Association is pending.

Water from the FCWP irrigates nearly 38% of the land under irrigation in the Philipsburg Valley. Consequently, the economy of the region is linked to serviceability of this project.

Water from the project provides lifeblood for agriculture, fish and wildlife, and recreation; it irrigates ranch and farmland, recharges the flow of Flint Creek, supports local wildlife habitat, provides trout fisheries, and offers a recreational resource to hunters and fishers. It gives refuge to the bull trout, a federally listed endangered species, and to the west slope cutthroat trout, a "species of special concern."

Due to deterioration from age, slope instability, and insufficient repairs, the East Fork Siphon on the Main Canal now requires substantial rehabilitation. The siphon ruptured in June 2001, and it was shut down for repairs. Each subsequent year, additional repairs have been undertaken, including patching of corrosion holes and replacing straps on a concrete anchor block. Shutdown during critical irrigation times can have a deleterious effect on crops.

Measurements in July 2004 verified that the Main Canal lost nearly 13% of its flow between the headgate and the siphon and nearly 20% end to end. A considerable quantity of water is lost through the highly pervious canal prism. The Flint Creek Water Users wish to stem the loss of water from the Main Canal, stop the damage, and return this precious resource to beneficial use.

In order to address these concerns, the DNRC, State Water Projects Bureau (SWPB) proposes to rehabilitate the canal by (1) installing canal lining on the most pervious reaches of the canal and (2) fortifying the canal against slope failure by applying shotcrete on the left inner side slope. These measures will rehabilitate the FCWP's infrastructure and conserve water.

For these reasons, the DNRC-WRD is requesting a grant of \$100,000 and a loan of \$400,000 to replace the East Fork Siphon and line the Main Canal, and thereby prevent seepage, protect private property, and conserve water for more beneficial use to landowners and to the general public.